Bowel Obstruction

Definition
Blockage of small or large bowel. Most common in newborns. Less common in older children, unless they have a specific risk factor.

Causes
Newborns
- Atresia: duodenal (often associated with Down's syndrome), jejunal or ileal
- Imperforate anus
- Malrotation
- Duplication of bowel
- Volvulus

Infants
- Atresia: duodenal (often associated with Down's syndrome), jejunal or ileal
- Imperforate anus
- Malrotation
- Duplication of bowel
- Volvulus
- Pyloric stenosis
- Post-surgical adhesions
- Intussusception (most common in children 3 months to 2 years of age)

Older Children
- Post-surgical adhesions
- Intussusception (unusual but possible)
- Malrotation
- Duplication of bowel
- Tumor

History
- Vomiting: often with sudden onset; may be stained with bile if obstruction is below ligament of Treitz; may be projectile if obstruction is high in the GI tract; may be stained with feces if obstruction is very low in the GI tract
- Diarrhea: bloody or colour of red currant jelly (indicates intussusception)
- Abdominal pain: severe and initially crampy
- Bowel movements decreased or absent
- Abdominal distension
- History of GI surgery
- History of similar pain

Physical Findings
- General observations of colour, hydration and facial expression
- Temperature normal or mildly elevated
- Tachycardia
- Blood pressure normal, unless child is in shock
- Capillary refill normal, unless child is in shock

Abdominal Examination
- Abdominal distension, unless the obstruction is located very high in the GI tract
- Peristaltic waves may be visible
- Bowel sounds may be increased in early stages and disappear later
- Diffuse tenderness
- Shifting dullness can help to distinguish distension caused by ascites from obstruction

Differential Diagnosis
See "Causes," above, this section.

Complications
- Perforation
- Peritonitis
- Strangulation of bowel segment
- Sepsis
- Hypotension, shock
- Death

Diagnostic Tests
- Examination of stool for occult blood
- Urinalysis

Management
Goals of Treatment
Treatment is directed to cause and is thus usually surgical.
- Relieve distension
- Maintain hydration
- Prevent complications

Appropriate Consultation
Consult a physician and prepare to medevac.

Adjuvant Therapy

- Start a large-bore IV (14- or 16-gauge) with normal saline
- Give enough fluid for maintenance or more, according to state of hydration
- If there is evidence of hypovolemia or shock, give a bolus of IV fluid (20 mL/kg) over 20 minutes; repeat as necessary until hypovolemia is corrected (up to three times in 1 hour)

See "Shock," in chapter 20, "General Emergencies and Major Trauma."

Nonpharmacologic Interventions

- Bed rest
- Nothing by mouth
- Insert a nasogastric tube and attach to low suction or to straight drainage
- Insert urinary catheter; measure hourly urinary output

Pharmacologic Interventions

Analgesia may be necessary or prudent if transfer is delayed. Discuss with a physician first.

meperidine ***(D class drug),***

dosage depending on age and weight of child

Monitoring and Follow-Up

Monitor ABCs, vital signs, intake and output, abdominal findings and general condition frequently while awaiting transfer.

Referral

Medevac as soon as possible.